IDAHO OUTLOOK

NEWS OF IDAHO'S ECONOMY AND BUDGET

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The collapse in business investment was a major contributor to the 2001 U.S. recession. This was a significant reversal from the leading role it played during the 1990s and 2000. Overnight, investment went from being a major economic growth engine to anchor. Much of the decline is attributable to the high-tech sector, which saw its long stretch of double-digit growth end abruptly in 2000. In 2001, nominal high-tech investment, which consists of business spending on computers, communications equipment, and software, plunged almost 17%.

The fallout from high-tech's problems spread through the economy. It has been estimated that after contributing about ¾ percentage point to GDP growth in 1998, 1999, and 2000, the drop in high-tech investment erased 0.4 percentage point growth in 2001. Given the profound impact high-tech investment has had in shaping the business cycle, it is worthwhile to investigate the causes of recent high-tech investment patterns.

One of the leading experts of recent high-tech investment is Mark Doms. He is a Senior Economist with the Federal Reserve Bank of San Francisco. This *Outlook* summarizes his detailed observations that appear in his excellent article titled "The Boom and Bust in Information Technology Investment." Mr. Doms' investigation suggests high-tech investment was stronger than expected in the years leading up to 2001, but weaker than anticipated thereafter. His article explains why this investment pattern took place.

Ebullience is one reason for the excess investment in the 1990s. The Dot-Com sector is usually held up as the classic case of over investment. Indeed, huge sums of money poured into an endless number of ventures hoping to be the next Amazon.com or EBay. Unfortunately, most met the dismal fate of Pets.com. Mr. Doms estimates the Dot-Com sector contributed about 6.5% of the increase in high-tech spending from 1995 to 2000 and 13.1% of the drop from 2000 to 2002.

However, the Dot-Com excesses pale in comparison to those of telecom services. The telecom sector went on a spending binge that saw investment by publicly traded companies rise from $47 billion in 1995 to $121 billion in 2000. Since the industry spends a fortune on high-tech investment, these swings have been felt. Mr. Doms estimates more than two-thirds of the 2001 decline in high-tech spending can be blamed on telecoms. It was worse the next year. He also estimates nearly all of the high-tech spending decline in 2002 can be traced to telecoms.

The shortening of high-tech equipment service lives also boosted investment during the last decade. Three factors that led to the change in service lives are considered. First, was the Y2K problem. The U.S. Department of Commerce estimates about $100 billion was spent to fix the Y2K problem. While this amount seems huge, it appears fixing the Y2K problem had little influence over the timing of high-tech investment. This is because it was a small component of total spending. For example, annual Y2K-related spending on software and hardware peaked at about $8 billion in 1998, which was negligible compared to the $305 billion private businesses spent on software and hardware that year.

The second reason for accelerated investment was the change in PC hardware requirements that was driven by the demands of increasingly sophisticated software. For example, the minimum requirements for running Microsoft's Office product grew tremendously in the 1990s. The RAM requirement rose from 2MB in 1994 to 64MB in 2000, while the hard drive requirement went from 8 MB to 650 MB. The minimum requirements have been relatively stable since 2000. This explains why companies may have replaced their PCs more frequently during then late 1990s and less since then. The third reason is the rapidly falling price of computer power made it cheaper to replace older machines instead of trying to keep them running.

Technological changes also shaped recent high-tech investment patterns. Technological changes helped prices for computers plummet in the 1990s. The price declines reflect the falling price for computer components. For example, the price of semiconductors fell an average of 13.3% between 1992 and 1995, but dropped a whopping 47.3% between 1995 and 1999.

Telecommunication equipment prices also declined in the late 1990s and into 2000. One reason for this was prices for fiber-optic equipment started falling very quickly while the importance of fiber-optic equipment was increasing. This drop was further hastened by technological changes that increased the capacity of fiber-optics.

While the discussion has focused on hardware, it should be noted that since 1990 software has accounted for the lion's share of high-tech investment. Software experienced quantum changes over the last few years. The Windows operating system that matured in the 1990s serves as a good example. Windows 95 ushered in a new standard for graphical user interfaces. This was followed by Windows 98 that improved the operating system's stability. Interestingly, there is some evidence the pace of innovation may have slowed. For example, anecdotal evidence show about one quarter of PCs still use Windows 98 instead of Windows XP. This suggests the improvements from Windows 98 to Windows XP are not as great as between other versions of the operating system. This is consistent with the acceleration of high-tech investment through 2000 and the slowdown in 2001 and 2002.

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General Fund Update

As of April 30, 2004

	$ Millions		
Revenue Source	FY04 Executive Estimate[3]	DFM Predicted to Date	Actual Accrued to Date
Individual Income tax	895.8	813.1	790.0
Corporate Income tax	100.1	80.8	73.9
Sales Tax	884.1	735.0	733.5
Product Taxes[1]	45.3	37.4	37.0
Miscellaneous	150.9	100.6	106.8
TOTAL GENERAL FUND[2]	**2,076.2**	**1,766.9**	**1,741.2**

1 Product Taxes include beer, wine, liquor, tobacco and cigarette taxes
2 May not total due to rounding
3 Revised Estimate as of January 2004

General Fund revenue was $1.5 million lower than expected in April. Fiscal year-to-date revenue is now $25.7 million lower than expected. Strength in the Corporate Income Tax, Sales Tax, and Product Taxes was offset by weakness in the Individual Income Tax and Miscellaneous Revenue receipts. A closer examination of the year-to-date results provides a different picture. Quite simply, the lion's share of the shortfall at this point is due to accelerated individual income tax refund payouts. This element of the revenue stream is expected to fully correct itself over the next two months.

Individual income tax revenue was $4.2 million lower than expected in April. On the collection side, withholding collections were $0.2 million higher than predicted and filing payments were $9.7 million lower than predicted for the month. This was partially offset by refunds that were $4.9 million lower than expected and miscellaneous diversions that were $0.4 million lower than expected. Filing collections are now $3.8 million lower than expected for this point in the fiscal year, and withholding collections are $2.8 million higher than expected on a cumulative basis. Gross collections for the year to date are $952.6 million, versus $953.6 million predicted. Refunds are $22.2 million higher than predicted on a year-to-date-basis, but are expected to be $20-25 million LOWER than expected for the next two months. As long as filing collections and withholding collections remain on target, the refund correction should bring the individual income tax very close to the forecasted amount by the close of the FY 2004.

Corporate income tax revenue was slightly ahead of target in April, coming in $0.4 million higher than expected. Year-to-date receipts are now $6.9 million behind expectations with just two months remaining in the fiscal year. Filing collections are $4.5 million light, and quarterly estimated payments are $2.5 million lower than expected.

Sales tax revenue staged a remarkable recovery in April, coming in $3.3 million higher than expected. This is the best monthly performance this fiscal year, and reduced the year-to-date gap by over two-thirds, to just $1.5 million. Some of this strength may be related to accelerated refund processing (and the resulting strong cash-flow for consumers), but it also indicates underlying economic strength in Idaho's economy.

Product taxes were $0.2 above target in April due to strength in cigarette and tobacco tax collections. The Product Tax category is now $0.4 million lower than expected for the fiscal year to date. Miscellaneous revenues were $1.2 million lower than expected for the month of April. The weakness was in interest earnings, and is related to the timing of tax anticipation note repayments.